

Remarks

In view of the preceding amendments and the comments which follow, and pursuant to 37 C.F.R. § 1.111, amendment and reconsideration of the Official Action of March 26, 2003, is respectfully requested by the Applicant.

Summary

Claims 1 - 9 were pending in the application. Claims 1 has been amended. Claim 7 has been cancelled. The amendments find support in the specification. No new matter has been introduced as a result of these amendments. Claims 1 – 6, 8 and 9 are pending following entry of the present amendment.

Rejection of Claims

In response to the Official Action mailed March 26, 2003, Applicant respectfully requests reconsideration, reexamination and allowance of claims 1 - 6, 8, and 9, in view of the above amendments and the following remarks.

The Examiner has rejected claim 1 under 35 U.S.C §112, first paragraph as containing subject matter which was not described in the specification. Claim 1 has been amended to remove the rejection and now recites "the angle defined by extensions of the centerlines of two adjacent magnetic pole teeth." Applicant submits that the rejection under 35 U.S.C. §112, first paragraph, is no longer valid and Applicant respectfully and earnestly solicits the Examiner's withdrawal of same.

The Examiner has next rejected claims 1 – 5 under 35 U.S.C §102 (b) as being anticipated by Sakamoto (U.S. 4,983,867). The pending claim 1 is directed to an inner rotor motor comprising a rotor and a stator. The stator includes a plurality of teeth that are outside a circumference of the rotor and face the rotor. Further, this stator is provided so that a central angle of the rotor with respect to the stator is in a range within 180 degrees. Whereas in Sakamoto,

the stator completely surrounds the rotor and thus achieves a 360 degrees circumferential angle (See referring to Fig. 3).

In addition, claim 1 further recites that the magnetic pole teeth are set so that a first angle defined by extensions of the centerlines of two adjacent magnetic pole teeth is smaller than a second angle defined by lines each connecting a tip center of one of the adjacent magnetic pole teeth center of one of the adjacent magnetic pole teeth and a rotation center of the rotor. Whereas in Sakamoto, the stator poles 10a, 10b, and 10c extend toward the theoretical center of the stator which coincides with the theoretical center of the rotor. Therefore, an angle defined by extensions of the centerlines of adjacent stator poles is geometrically equal to an angle defined by lines each connecting a tip center of one of the adjacent magnetic pole teeth and a rotation center of the rotor.

Therefore, a point of distinction of the present invention is that this stator is provided so that a central angle of the rotor with respect to the stator is in a range within 180 degrees. This unique stator arrangement serves to achieve a structure wherein the magnetic pole teeth are set so that a first angle defined by extensions of the centerlines of two adjacent magnetic pole teeth is smaller than a second angle defined by lines each connecting a tip center of one of the adjacent magnetic pole teeth center of one of the adjacent magnetic pole teeth and a rotation center of the rotor. This arrangement and its corresponding effects are not anticipated by Sakamoto. Therefore, Applicant submits that claim 1 is now allowable, and that claims 2 - 5 which are dependent on claim 1 are also allowable. Thus, the rejections under 35 U.S.C. §102 (b) are no longer valid and Applicant respectfully and earnestly solicits the Examiner's withdrawal of same.

The Examiner has next rejected claims 6 – 8 under 35 U.S.C §103 (a) as being unpatentable due to In re Boesch, 617 F.2d 272,205 that held that discovering an optimum value of a result effective variable involves only routine skill in the art. As indicated above, claim 7 has been cancelled. However, since claim 1 has been shown to be allowable, and that claims 6, 8 are dependent on

claim 1, thus claims 6, and 8 are also allowable. Applicant submits that claim 9 is also allowable due to a similar dependence on claim 1.

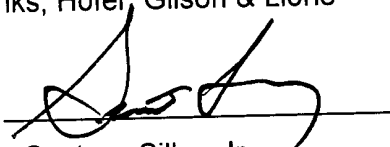
In conclusion, Applicant submits that claims 1 – 6, 8, and 9 are all in condition for allowance. Applicant believes that there are no fees due in connection with the present amendment. If, there are additional fees due, Applicant requests that this paper constitutes any necessary petition and authorizes the Commissioner to charge any underpayment, or credit any overpayment, to Deposit Account No. 23-1925.

If the examiner finds that there are any outstanding issues which may be resolved by a telephone interview, the Examiner is invited to contact the undersigned at the below listed number.

Respectfully submitted,

Brinks, Hofer, Gilson & Lione

By

A handwritten signature in black ink, appearing to read 'Gustavo Siller, Jr.', is written over a horizontal line.

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June 25, 2003
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APPENDIX A

Version with Markings to Show Changes Made

Serial No. 10/091,356
Attorney Docket No. 9281/4298
Masashi Nakagawa

In the Claims:

Please amend Claim 1 as follows:

1. (Amended) An inner rotor motor comprising:
a rotor having plural magnetic poles disposed in a circumferential shape; and
a stator including a stator core having plural magnetic pole teeth that are outside a circumference of the rotor and face the rotor, a coil being wound around each of the magnetic pole teeth,
wherein the stator is provided so that a central angle of the rotor with respect to the stator is in a range within 180 degrees; and
the magnetic pole teeth are set so that a first angle defined by extensions of the centerlines of two adjacent magnetic pole teeth is smaller than a second angle defined by lines each connecting a tip center of one of the adjacent magnetic pole teeth center of one of the adjacent magnetic pole teeth and a rotation center of the rotor.